PATENT
56587.22

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Sang Yong Bae et al.   :

     :   Examiner: Nathan C. Uber

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Serial No.:   10/595,998   :   Group Art Unit: 3622

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Filed: July 14, 2006   :   Attorney Docket No.: 56587.22

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For: ON-LINE ADVERTISING   :   Customer No.:   027128

     SYSTEM AND METHOD   :

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     :   Confirmation No.: 1534

Last Office Action: December 28, 2009   :

PROPOSED AMENDMENT

12.   A computer-implemented on-line advertising method, the method comprising the steps of:

maintaining advertisement data of a plurality of advertisements, at least one keyword related to each said advertisement and a category corresponding to each said advertisement, in an advertisement database;

determining a content category for an on-line content provided to a user terminal through a communication network via a content classifying system utilizing a predetermined classification algorithm;

maintaining a content identifier and said content category associated with said on-line content in a content database, the content identifier identifying said on-line content;

maintaining in a keyword database a keyword, a similar keyword related thereto and an expansion keyword related to the keyword, wherein the similar keyword being a keyword having a similar meaning to the meaning of said keyword and the expansion keyword representing an upper concept or a lower concept of the keyword;

storing at least one of said databases in a memory;

searching the advertisement database for advertisement data corresponding to the category associated with the on-line content to be displayed to a user;

1

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selecting advertisement data among the searched advertisement data, based on a predetermined criterion, by using at least one keyword related to the searched advertisement data; and

controlling an advertisement associated with the selected advertisement data to be displayed on the user terminal in association with the content, where said steps of determining a content category, searching the advertisement database, selecting advertisement data and controlling an advertisement is performed by a processor,

wherein the step of selecting advertisement data comprises the steps of:

searching the on-line content to be displayed to the user for the at least one keyword related to the searched advertisement data;

inspecting at least one selected from a group consisting of a number of the searched keywords in the on-line content, positions of the searched keywords on the on-line content and a font style of the searched keywords;

computing [[an]] a first exposure point for the search advertisement data based on a result of said inspection for the searched keywords;

computing a second exposure point for the search advertisement data by using at least one of three factors comprising a number of the searched similar keywords in the content, positions of the searched similar keywords in the content and a font style of the searched expansion keywords;

computing a third exposure point for the search advertisement data by using at least one of three factors comprising a number of the searched expansion keywords in the content, positions of the searched expansion keywords in the content and a font style of the searched expansion keywords; and

selecting advertisement data from the searched advertisement data based on the first, second and third exposure points [[point]].

2

REMARKS

CLAIM REJECTION UNDER 35 U.S.C. § 103(A)

(1) The Office Action states that claims 1-16 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Pub. No. 2004/0059708 issued to Dean e al. (hereinafter "Dean") in view of U.S. Patent No. 6,778,975 issued to Anick et al. (hereinafter "Anick").
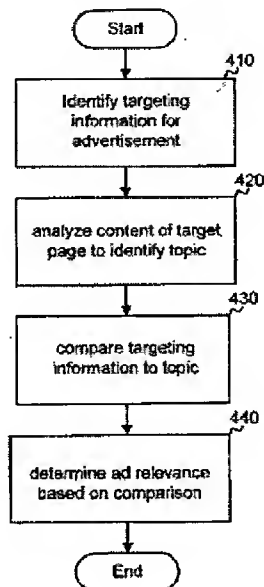
Claim 12:

(1) Claim 12, as amended, recite (among other things) that (1) maintaining a catabase for contextual ads[1], the database containing at least one keyword and a category corresponding to each said contextual ads (**categorize the contextual ads**); (2) determining a content category for a target page (on-line content) (**categorize the target page**); (3) maintaining a keyword database containing a keyword, a similar keyword related thereto and an expansion keyword related to the keyword; and (4) selecting ads corresponding to the searched target page (matching step). The claimed matching step is a two-step matching which includes comparing the categories of the contextual ads and the target page and use of exposure point.

(2) The claimed invention as amended herein further recites the detailed step of computing the exposure point including the steps of: computing a first exposure point for the search advertisement data based on a result of said inspection for the searched keywords; computing a second exposure point for the search advertisement data by using at least one of three factors comprising a number of the searched similar keywords in the content, positions of the searched similar keywords in the content and a font style of the searched expansion keywords; computing a third exposure point for the search advertisement data by using at least one of three factors comprising a number of the searched expansion keywords in the content, positions of the searched expansion keywords in the content and a font style of the searched expansion keywords; and selecting advertisement data from the searched advertisement data based on the first, second and third exposure points.

(3) In reference to Fig. 4 of Dean, reproduced for the Examiner's convenience, and para. [0043] - para. [0048], Dean is also directed to a method and system of providing contextual advertising. Dean discloses a method of identifying targeting information for an advertisement (410),

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[1] The contextual advertising is a form of targeted advertising for advertisements appearing or webpages. A contextual advertising system generally scans the text of a website for keywords and returns advertisements to the webpage based on what the user is viewing.

3

analyzing the content of a target document to identify a list of one or more topics for the target document (420), comparing the targeting information to the list of topics to determine if a match exists (430), and determining that the advertisement is relevant to the target (440).

Dean	
Storing ads information in a database (240)	[0027] Ad entry and management component 210 is the component by which the advertiser enters information required for an advertising campaign and manages the campaign. An ad campaign contains one or more advertisements that are related in some manner. For example, the Ford Motor Company may have an ad campaign for zero percent financing, which could contain a series of advertisements related to that topic. Among the other things that could be provided by an advertiser through ad entry and management component 210 are the following: one or more advertising creatives (simply referred to as "ads" or "advertisements"), one or more sets of keywords or topics associated with those creatives (which may be used as targeting information for the ads), geographic targeting information, a value indication for the advertisement, start date, end date, etc. The data required for, or obtained by, ad entry and management component 210 resides in one of the databases 240.
Maintaining a keyword database	[0030] Databases 240 contain a variety of data used by advertising system 120. In addition to the information mentioned above in reference to ad entry and management system 210, databases 240 may contain statistical information about what ads have been shown, how often they have been shown, the number of times they have been selected, who has selected those ads, how often display of the ad has led to consummation of a transaction, etc. Although the databases 240 are shown in FIG 2 as one unit, one of ordinary skill in the art will recognize that multiple databases may be employed for gathering and storing information used in advertising system 120.
identifying targeting information for an ad (410)	[0043] The exemplary method is not limited by the order shown in the flow diagram. The process identifies targeting information for an advertisement. (Stage 410). The targeting information may be in the form of a list of keywords or phrases associated with the advertisement (e.g., "honda", "honda cars", "cars", etc.), as provided by advertiser 110 through ad campaign entry and management component 210. Alternatively, or in addition, the targeting information may be determined

4

	algorithmically, based on the content of the advertisement, the goods or services being advertised, the targeting of other related advertisements, etc. For example, if the content of the advertisement includes "Buy honda cars at the lowest prices of the year!", the terms "honda" or "honda cars" may be extracted from that content. The targeting information may also include other demographic information, such as geographic location, affluence, etc. Thus, the targeting information is simply some information from which a topic may be derived.
analyzing the content of a target document to identify a list of one or more topics for the target document (420)	[0044] Next, the target document (i.e., the document corresponding to which a relevant advertisement is requested) is analyzed to identify a topic corresponding to that target document. (Stage 420). The target document may be stored on a database 240 or may be provided by ad consumer 130 via ad consumer interface component 250. There are numerous ways in which the target document may be analyzed to identify this topic, as described below in reference to FIG. 5 and related text. [0047] One way to identify a topic corresponding to the target document is by analyzing some or all text within the target document, which shall be illustrated in reference to FIG. 5. FIG. 5 shows a sample document, entitled "Travels in Italy", which contains a collection of travel-related information pertaining to Italy. The document text contains the term "restaurant" (appearing 20 times), "chianti" (appearing 10 times), and "the" (appearing 100 times). It could be determined that one or more of each term (word or phrase) that appears in the title of the target document corresponds to a topic of the target document. On this basis, the topics for this document may be "travels", "in", and/or "italy." [0048] Alternatively, it could be determined that one or more of each term that appears in the body of the target document corresponds to a topic of the target document. In the simplest case, each term within the target document would be identified as a topic. A slightly more complex approach would be to identify a term as a topic if it appears in the target document more than N times, such as N=2 (and indeed such a threshold-based approach could be used whenever terms within text are being analyzed). Even more complex analysis could be performed, such as by using a term vector for the target document, which assigns weights to each term. For example, terms that appear frequently in the target document may be assigned a relatively higher weight than those that appear less frequently. And so the term "the" would have a higher weight than "restaurant", which would have a higher weight than "chianti".
Matching (430/440)	[0045] The targeting information identified in stage 410 is compared to the one or more topics identified in stage 420 to determine if a match exists. (Stage 430). A "match" need not be an exact match. Instead, a match is an indication of a relatively high degree of similarly, and/or a predetermined (e.g., absolute) degree of similarity. If a match exists, the advertisement is determined to be relevant to the target document (stage 440) and may be provided to ad ordering component 270, for eventual provision to ad consumer 130 via ad consumer interface component 250.

(4) First, Dean does not teach storing a keyword database containing a keyword, a similar keyword[2] related thereto and an expansion keyword[3] related to the keyword. While Dean discloses a database 240 for storing one or more keywords and a topic of the ads, it does not teach a separate keyword database containing a keyword, the similar keyword and the expansion keyword.

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[2] It has a similar meaning to the meaning of said keyword.

[3] It represents an upper concept or a lower concept of the keyword

5

(5) Dean teaches various methods of determining a topic of the target documents. For example, the topic of the target document can be determined based on a predetermined number of appearances of terms in the title or body of the target document.

Alternatively, more complex analysis could be performed, such as by using a term vector for the target document, which assigns weights to each term. For example, terms that appear frequently in the target document may be assigned a relatively higher weight than those that appear less frequently. However, it does not teach the claimed method of computing the exposure point by using the stored keyword, similar keyword and expansion keyword. The claimed method of computing the exposure point includes the steps of: computing a first exposure point for the search advertisement data based on a result of said inspection for the searched keywords; computing a second exposure point for the search advertisement data by using at least one of three factors comprising a number of the searched similar keywords in the content, positions of the searched similar keywords in the content and a font style of the searched expansion keywords; computing a third exposure point for the search advertisement data by using at least one of three factors comprising a number of the searched expansion keywords in the content, positions of the searched expansion keywords in the content and a font style of the searched expansion keywords; and selecting advertisement data from the searched advertisement data based on the first, second and third exposure points.

6